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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,558	06/20/2000	Hidetoshi Saito	50395-058	7401

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Washington, DC 20005-3096

EXAMINER
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TRAN, HIEN THI

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/597,558

**Applicant(s)**SAITO ET AL. *eb***Examiner**

Hien Tran

**Art Unit**

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/15/03 &amp; 9/20/00</u> . | 6) <input type="checkbox"/> Other: ____.  |

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### **DETAILED ACTION**

#### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Drawings***

2. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings to comply with CFR 1.84(p)(5), e.g. they should include the reference sign(s) mentioned in the specification and vice versa.

#### ***Specification***

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### ***Claim Objections***

4. Claim 17 is objected to because of the following informalities:

In claim 17, line 5 "n" should be changed to --in--.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 4, 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, line 2 it is unclear as to what is intended by "the same type".

In claim 6, the language of the claim is directed to method of making which renders the claim vague and indefinite as it is unclear as to what structural limitation applicants are attempting to recite.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-2, 4-10 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 835,684.

With respect to claims 1-2, EP 835,684 discloses an apparatus comprising:

a filter 3 for trapping particulate matter; a catalytic converter 2 upstream of the filter, the catalytic converter comprising a metallic porous bodies having an average pore diameter within the range of 500-2000  $\mu\text{m}$  (.5-2 mm); and a case 1 that houses the filter and the catalytic converter (Fig. 1; col. 1, lines 15-17; col. 2, lines 14-43; col. 4, lines 5-16). Since the catalytic converter of EP '684 has a pore diameter within the instant range, it inherently contains the same porosity.

With respect to claims 4-5, 10, see col. 1, lines 15-16, col. 2, lines 22-34.

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Since claim 6 is not structurally further limiting, the apparatus of EP '684 meets the claim.

With respect to claim 7, EP '684 discloses a gap between the filter and the catalytic converter (col. 3, lines 1-4; col. 4, line 10, Fig. 1).

With respect to claims 8-9, EP '684 discloses that the filter and the catalytic converter carry an oxidation catalyst, e.g. Pt (col. 4, lines 5-41).

Instant claims 1-2, 4-10 structurally read on the apparatus of EP 835,684.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 3, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 835,684 in view of EP 900,922.

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With respect to claim 3, EP '922 discloses that the catalyst loading is 1.0-1.5 g/l (page 10, line 38; page 11, line 21).

It would have been obvious to one having ordinary skill in the art to select an appropriate catalyst loading, such as the one taught by EP '922 in the apparatus of EP '684 since such amount is efficiently good for exhaust purification and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With respect to claims 11-15, EP '922 discloses another structure for the filter/catalytic converter, e.g. cylindrical shaped or laminated porous bodies with the thickness within the instant range (see, for example, Figs. 1A, 4-6).

The shape of the filter/catalytic converter is not considered to confer patentability to the claim. It would have been an obvious matter of design choice to select an appropriate shape for the filter/catalytic converter in the apparatus of EP '684, such as the one taught by EP '922 since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art, absence showing any unexpected results. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 835,684 in view of Ban (5,961,931).

Ban discloses provision of a space between the filter/catalytic converter.

It would have been obvious to one having ordinary skill in the art to mount the filter/catalytic converter in the case with a space therebetween as taught by Ban in the apparatus

of EP '684 so as to provide flow path for the system, as such is conventional in the art and no cause for patentability here.

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 835,684 in view of Hardy (4,677,823).

Hardy discloses provision of a muffler disposed downstream of the filter.

It would have been obvious to one having ordinary skill in the art to provide a muffler downstream of the filter as taught by Hardy in the apparatus of EP '684 so as to attenuate the sound, as such is conventional in the art and no cause for patentability here.

#### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jacobs et al and EP 849,444 are cited for showing state of the art.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HT  
February 19, 2004

*Hien Tran*

**Hien Tran**  
**Primary Examiner**  
**Art Unit 1764**